Strongyloides stercoralis eggs in the stools during anticancer therapy

R S JAYSHREE, HEMA SRIDHAR, GOVIND BABU,* T M SURESH*

Departments of Microbiology and *Medical Oncology, Kidwai Memorial Institute of Oncology, Hosur Road, Bangalore 560 029

We report a 45-year-old man with granulocytic sarcoma who, following anticancer chemotherapy, developed florid strongyloidiasis, wherein eggs of Strongyloides stercoralis embedded in the exfoliated mucosa were seen in the stools. The eggs were interspersed with numerous rhabditiform larvae. He was treated with albendazole. [Indian J Gastroenterol 2001;20:160-161]

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A 45-year-old female Strongyloides stercoralis worms penetrate the intestinal mucosa, where they burrow in serpentine channels but rarely migrate below the muscularis mucosae. Here they lay several dozen thin-shelled eggs that embryonate and hatch into rhabditiform larvae. The larvae break junctional complexes between adjoining enterocytes to reach the intestinal lumen and are passed in feces.1 Strongyloides eggs are usually not detected in the feces, except after purgation.

A 45-year-old man with a diagnosis of granulocytic sarcoma of the left orbit received a second cycle of induction chemotherapy comprising cytosine arabinoside 200 mg twice a day for 7 days and daunorubicin 80 mg for 3 days. On day 13 he developed fever, pain in the left iliac fossa and gangrenous oral infection. He was empirically treated with gentamicin, cefotaxime and metronidazole. The following day he developed profuse diarrhea. Hemogram revealed absolute neutrophil count of 200/µL. Microscopic examination of freshly passed stool revealed numerous actively motile rhabditiform larvae of S. stercoralis, both free and entangled in the denuded mucosa. In addition, interspersed with the larvae and embedded in the mucosa were eggs of S. stercoralis (Fig). Albendazole 400 mg twice a day was administered since thiacetamide and ivermectin were not available. Cultures from blood, throat and pus from the gingiva yielded Pseudomonas aeruginosa.

The next day he developed coarse crepitations over the left infrascapular region that later became bilateral, and hypotension necessitating infusion of fluids, dopamine, packed cells and platelets. He gradually improved; repeat blood and throat swab cultures and stool microscopy were negative, and in about a week’s time he was fit to resume the next course of anticancer treatment.

While anticancer drugs are known to cause severe mucositis,2 denudation of the intestinal mucosa is rare. We had earlier reported a patient in whom anticancer chemotherapy induced denudation of the mucosa, resulting in the appearance in the stools of immature adult Hymenolepis nana worms adherent to the mucosa.3

In the present patient too, there was sloughing of the intestinal mucosa, which resulted in the excretion of eggs in situ. Heavy infection by S. stercoralis in immunocompromised hosts is also known to cause invasion by lariform larvae, resulting in sloughing of extensive patches of the mucosa that may be honeycombed by adult worms and larvae.4 There are three reports of eggs of this nematode being detected in the stool, mucosal scrapings of eroded uretha and sputum.4,5,6

It is important that microbiologists be aware of this possibility in immunocompromised hosts. This report also brings out the need for antihelminthic prophylaxis in high-risk patients with cancer.

References